

EFC Working Party on the Management of Mountain Watersheds

BAVARIA COUNTRY PAGE

Geographical setting

The Bavarian Alps cover an area of about 5.400 km² which is about 7% of the total area of Bavaria. The alpine range is situated in the south of the country stretching from east to west along the border to Austria. The highest peak is the Zugspitze with an elevation of about 3.000m. In addition there is the Bavarian Forest as a low mountain range in the east, whose peaks rise up to about 1.600 m asl. Due to the limited height there are no significant glaciers or areas with permafrost. In the Alps about 50% of the area are covered by forests, for all Bavaria the part is about 30%.

The Bavarian Alps are drained by several rivers flowing from south to north all discharging into the river Danube. The important rivers are the Iller, Lech, Isar, Inn and Salzach. The hydrographical regime of the Alpine rivers is ruled by snow pack melting, in the river Inn also by glacier melting. Downstream flows are lower in winter than in summer.

The Bavarian Alps are acting like a barrier for the low pressure areas frequently arriving from north-west. For this reason the mean annual precipitation in the Alps is fairly high and amounts from about 1.000 up to more than 2.000 mm in some regions. Consequently the availability of surface- and groundwater is rather high. Droughts or water scarcity don't play a role in southern Bavaria except periodically in exceptional years like 2003. But even then negative consequences are limited. In the north of the country the situation is rather different. The mean annual precipitation in some regions is as low as 500 mm. Consequently this part of Bavaria is much more likely to suffer from droughts and water scarcity.

Concerning natural hazards storms and floods are the predominant processes in terms of damage. Of course in the Alps also avalanches, landslides or debris flow play an important role. But the affected area is comparatively small and consequently the damage is limited.

Policies

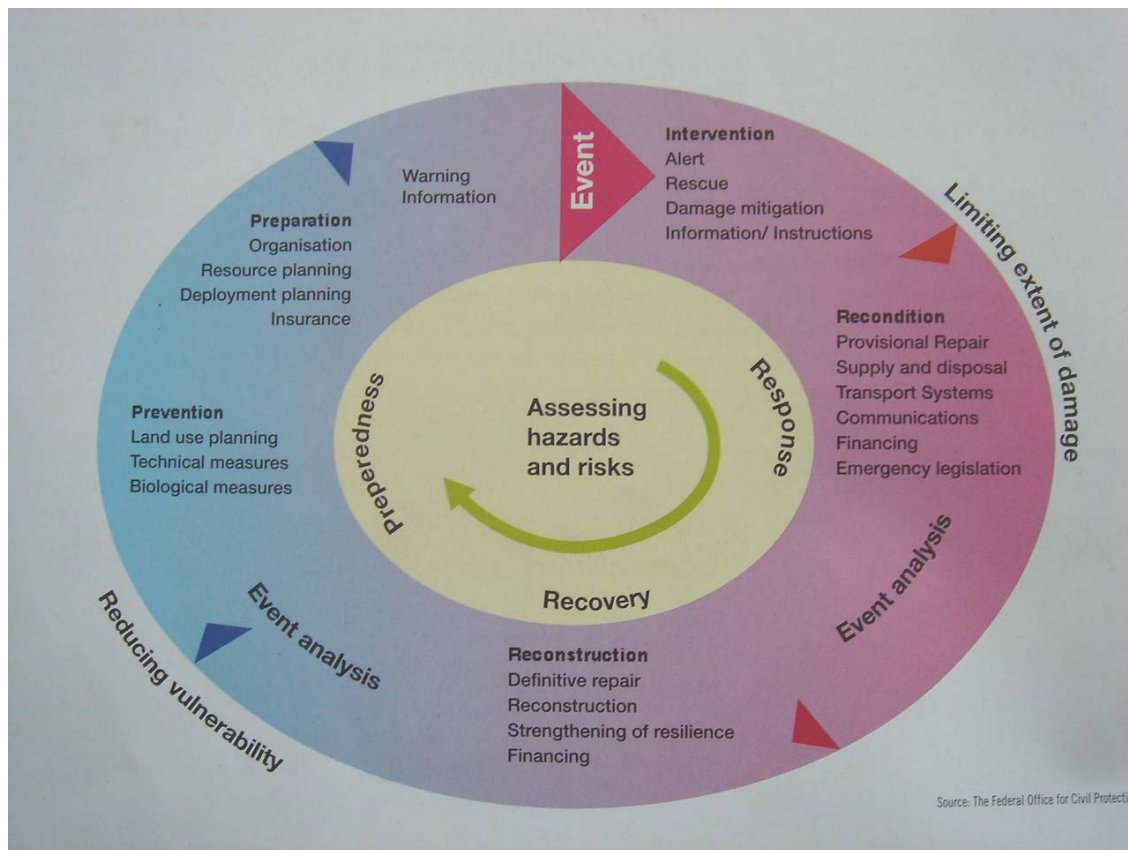
In Germany the countries are in charge for water management. In Bavaria this task is completed by the Bavarian Water Management Authorities. It includes a great variety of issues such as water protection and quality, quantity management, flood protection and warning or hydrological monitoring both for surface and groundwater. Concerning construction works and maintenance only small streams are in the responsibility of the local communities. In total there are 17 local Water Management Offices (WMO) in charge for all other water bodies inclusive torrents. They are organized in relation to the administrative borders of the counties. The WMO's have to evaluate any project whether it might have influence on the issues mentioned above. Also the design for river constructions works or the maintenance is done by these offices. Nowadays it's a general rule, that all activities are presented and discussed with the public and the communities in order to achieve an acceptance of planning.

During the past years the European Community passed a number of directives which have of course to be implemented in the member states. As examples the Water Framework Directive or the Flood Directive should be mentioned. After the disastrous flood in 1999 the so called "Action Programme 2020" was launched in Bavaria. This programme is an integral approach for flood risk management. It consists of 3 fields of action namely technical measures, natural retention and prevention. Within 20 years a sum of 2,3 billion Euros shall be invested for the improvement of sustainable flood protection.

In the field of mountainous natural hazards Bavaria is in close contact and discussion with the neighbouring countries in order to foster the exchange of experience and ideas concerning integral risk management.

Outlook

For the future it's of specific importance to continue the integral approach for natural hazard management as already started with the "Programme 2020". In order to achieve this objective all the issues mentioned in the "Risk Management Circle" have to be taken into account. The expected climate change is an additional challenge we will have to cope with. The international experience exchange and cooperation is an important tool for this task. Moreover the intensive discussion and cooperation with the local stakeholders will be indispensable. The main objective is to maintain a safety level which makes the alpine region a good place worth living in.



The Risk management Circle

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